scintillator) 1 for converting X-rays into rays of visible light, photoelectric converters 2a for converting visible light into electric signals, a substrate 2b that carries the photoelectric converter 2a, a base member 7 that supports the substrate 2b, circuit boards 5a, 5b for processing electric signals produced by photoelectric conversion, wires connected to the circuit boards, and an apparatus cabinet 8 containing the above components.--

A1 cont.

Please substitute the paragraph starting at page 2, line 15, and ending at line 23, with the following paragraph. A marked up copy of this paragraph, showing the changes made thereto, is attached.

--When the photoelectric converters 2a are required to be moisture-resistant, the fluorescent member 1 and the photoelectric converters 2a may be wrapped and hermetically sealed by a moisture-impermeable and X-ray transmissive film 6. Then, they are bonded and securely held to the base member 7 before being placed in the apparatus cabinet 8 to complete the operation of assembling the image pickup apparatus for X-ray photography.--

A2

Please substitute the paragraph starting at page 2, line 24, and ending at page 3, line 2, with the following paragraph. A marked up copy of this paragraph, showing the changes made thereto, is attached.

--Such image pickup apparatuses are conventionally used as stationary apparatuses for X-ray photography. However, in recent years, there is an increasing demand for a

A3 cont.

A3 cont.

lightweight, compact and portable image pickup apparatus adapted to rapid imaging operations and capable of producing fine images.--

Please substitute the paragraph starting at page 3, line 3, and ending at line 15, with the following paragraph. A marked up copy of this paragraph, showing the changes made thereto, is attached.

--Additionally, image pickup apparatuses having the above described configuration are required to safeguard the substrate 2b and other related components against impacts that can be applied thereto during transportation. The apparatuses are also required to be safeguarded as a whole against deformations that can be caused by the external load (mainly the weight of the person to be photographed) applied to the apparatus during X-ray photographing operations. To meet these requirements, the apparatus cabinet 8 has to be structurally very robust and this necessity of being robust has been obstructing the attempt to down-size and reduce the weight of the apparatus.--

A4

Please substitute the paragraph starting at page 3, line 18, and ending at line 25, with the following paragraph. A marked up copy of this paragraph, showing the changes made thereto, is attached.

--In view of the above described circumstances, it is therefore an object of the present invention to provide an image pickup apparatus for X-ray photography that is structurally

A5

able to absorb external impacts and possible resultant deformations, such as deflections of the cabinet, so that the interior is protected against damage and remains intact if the cabinet is deformed by the external load.--

A5 cont'd

Please substitute the paragraph starting at page 3, line 26, and ending at page 4, line 8, with the following paragraph. A marked up copy of this paragraph, showing the changes made thereto, is attached.

--According to the present invention, the above object of the invention is achieved by providing a two-dimensional image pickup apparatus comprising an apparatus cabinet containing therein a substrate member and a photoelectric converter unit having a plurality of photoelectric converters formed on the substrate member. At least the photoelectric converter unit is arranged on a base member. The portion of the cabinet located opposite to its light receiving section is deformable.--

A6

Please substitute the paragraph starting at page 4, line 16, and ending at line 22, with the following paragraph. A marked up copy of this paragraph, showing the changes made thereto, is attached.

--According to the present invention, there is also provided an image pickup apparatus comprising a substrate, a photoelectric converter unit having a plurality of

A7 cont'd

photoelectric converters and a cabinet containing the photoelectric converter unit, and a shock absorbing means being arranged between the photoelectric converter unit and the cabinet.--

A7 cancel

Please substitute the paragraph starting at page 4, line 23, and ending at line 24, with the following paragraph. A marked up copy of this paragraph, showing the changes made thereto, is attached.

A8

--For the purpose of the present invention, the shock absorbing means may be containers.--

Please substitute the paragraph starting at page 4, line 25, and ending at line 26, with the following paragraph. A marked up copy of this paragraph, showing the changes made thereto, is attached.

A9

--For the purpose of the present invention, the containers may contain gas in a sealed state.--

Please substitute the paragraph starting at page 4, line 27, and ending at page 5, line 7, with the following paragraph. A marked up copy of this paragraph, showing the changes made thereto, is attached.

--A two-dimensional image pickup apparatus according to the present invention may further comprise a circuit board for processing electric signals from the photoelectric converters also contained in the apparatus cabinet, and cooling liquid contained in a sealed state at least in the containers held in direct contact with the electronic parts arranged on the circuit board.--

A10

Please substitute the paragraph starting at page 5, line 10, and ending at line 11, with the following paragraph. A marked up copy of this paragraph, showing the changes made thereto, is attached.

--FIG. 1 is a schematic cross sectional view of a conventional two-dimensional image pickup apparatus.--

A11

Please substitute the paragraph starting at page 5, line 12, and ending at line 14, with the following paragraph. A marked up copy of this paragraph, showing the changes made thereto, is attached.

--FIGS. 2, 3A, 4 and 5 are schematic cross sectional views of embodiments of a two-dimensional image pickup apparatus of the present invention.--

A12

Please substitute the paragraph starting at page 5, line 15, and ending at line 17, with the following paragraph. A marked up copy of this paragraph, showing the changes made thereto, is attached.

A13

--FIG. 3B is a schematic perspective view of the embodiment of the two-dimensional image pickup apparatus of FIG. 3A.--

Please substitute the paragraph starting at page 6, line 2, and ending at line 6, with the following paragraph. A marked up copy of this paragraph, showing the changes made thereto, is attached.

A14

--FIG. 2 is a schematic cross sectional view of a first embodiment of the invention. In FIG. 2, the components that are the same as or similar to those of the apparatus of FIG. 1 are denoted by the same reference symbols.--

Please substitute the paragraph starting at page 7, line 10, and ending at line 17, with the following paragraph. A marked up copy of this paragraph, showing the changes made thereto, is attached.

A15 (Amt)

--FIGS. 3A and 3B schematically illustrate a second embodiment of the invention, which will be specifically described below. There are shown a fluorescent member 1, two-dimensionally arranged photoelectric converters 2a, a substrate 2b typically made of glass,

A15 final. and a moisture-impermeable film 6. The moisture-impermeable film 6, the fluorescent member 1, and the substrate 2b are bonded together.--

Please substitute the paragraph starting at page 8, line 11, and ending at line 17, with the following paragraph. A marked up copy of this paragraph, showing the changes made thereto, is attached.

--During an X-ray photographing operation, the image pickup apparatus 8 is subjected to the load of the object to be photographed and can become deflected or otherwise deformed. However, the containers 9 distribute the load. This prevents the load from being intensively borne by part of the substrate 2b and thereby causing damage.--

A16

Please substitute the paragraph starting at page 8, line 18, and ending at page 9, line 2, with the following paragraph. A marked up copy of this paragraph, showing the changes made thereto, is attached.

--Since the apparatus cabinet 8 itself is required to be transmissive of X-rays and lightweight as pointed out above, it is typically formed by combining a metal plate and CFRP (carbon-fiber-reinforced plastic). Although the load bearing capacity of the apparatus cabinet 8 may be improved by increasing the thickness of the cabinet, this will defeat the effort to reduce its weight. In this embodiment, however, because the containers 9 operate as reinforcement for

A17 amd

protecting the inner components as they are elastically deformed, the load bearing capacity of the apparatus cabinet 8 does not particularly have to be taken into consideration.--

Please substitute the paragraph starting at page 9, line 15, and ending at line 24, with the following paragraph. A marked up copy of this paragraph, showing the changes made thereto, is attached.

--The containers 9 containing cooling liquid in a sealed state are preferably held in contact with the electronic parts 5c and, at the same time, with the apparatus cabinet 8. Those portions of the apparatus cabinet 8 that are held in contact with the related containers 9 are preferably made of a thermally highly conductive material such as metal. Additionally, the apparatus cabinet 8 may be provided with heat-emitting fins (not shown), whose dimensions are, of course, confined within a permissible limit.--

Please substitute the paragraph starting at page 10, line 16, and ending at line 20, with the following paragraph. A marked up copy of this paragraph, showing the changes made thereto, is attached.

--As described above in detail, an image pickup apparatus adapted to X-ray photography according to the invention shows an improved shock-absorbing property and an enhanced load-bearing ability to allow the apparatus to be further down-sized and become lightweight.--